|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| r2\_score value for insurance\_pre.csv file Machine learning(Regression) | | | | | |
| MULTIPLE REGRESSION | | | | | |
| r2\_score value for insurance\_pre.csv = 0.786 | | | | | |
| SUPPORT VECTOR MACHINE | | | | | |
| SINO | HYPER TUNING PARAMETERS | Kernel (linear) | kernel (poly) | kernel (rbf) | kernel (sigmoid) |
| 1 | C-0.1 | -0.155 |  | -0.986 | -0.987 |
| 2 | C-1 | -0.148 |  | -0.0985 | -0.987 |
| 3 | C-10 | -0.04 |  | -0.0967 | -0.987 |
| 4 | C-100 | 0.521 |  | -0.0884 | -0.987 |
| 5 | C-500 | 0.613 |  | -0.0768 | -0.987 |
| 6 | C-1000 | 0.618 |  | -0.0674 | -0.987 |
| 7 | C-2000 | 0.625 |  | -0.0285 | -0.987 |
| 8 | C-3000 | 0.666 |  | 0.0123 | -0.987 |
| 9 | C-5000 | 0.706 |  | 0.0923 | -0.987 |
| 10 | C-7000 | 0.761 |  | 0.1624 | -0.987 |
| 11 | C-10000 | 0.761 |  | 0.246 | -0.987 |
|  |  |  |  |  |  |
| r2\_score value for insurance\_pre.csv = 0.761 | | | | | |
|  |  |  |  |  |  |
| DECISION TREE | | | | |  |
| SINO | criterion | splitter | max\_features | r2\_score value |  |
| 1 | mse | best | auto | 0.709 |  |
| 2 | mse | random | auto | 0.698 |  |
| 3 | mse | best | sqrt | 0.722 |  |
| 4 | mse | random | sqrt | 0.697 |  |
| 5 | mse | best | log2 | 0.699 |  |
| 6 | mse | random | log2 | 0.606 |  |
| 7 | mae | best | auto | 0.667 |  |
| 8 | mae | random | auto | 0.717 |  |
| 9 | mae | best | sqrt | 0.771 |  |
| 10 | mae | random | sqrt | 0.65 |  |
| 11 | mae | best | log2 | 0.721 |  |
| 12 | mae | random | log2 | 0.729 |  |
| 13 | Firedmen\_mse | best | auto | 0.694 |  |
| 14 | Firedmen\_mse | random | auto | 0.716 |  |
| 15 | Firedmen\_mse | best | sqrt | 0.703 |  |
| 16 | Firedmen\_mse | random | sqrt | 0.68 |  |
| 17 | Firedmen\_mse | best | log2 | 0.68 |  |
| 18 | Firedmen\_mse | random | log2 | 0.538 |  |
|  |  |  |  |  |  |
| Best r2\_score value for insurance\_pre.csv = 0.771 | | | | |  |
|  |  |  |  |  |  |
| RANDOM FOREST | | | | |  |
| SINO | criterion | max\_features | N\_Estimaes | r2\_score value |  |
| 1 | mse | auto | 10 | 0.852 |  |
| 2 | mse | auto | 50 | 0.857 |  |
| 3 | mse | auto | 100 | 0.86 |  |
| 4 | mse | sqrt | 10 | 0.847 |  |
| 5 | mse | sqrt | 50 | 0.868 |  |
| 6 | mse | sqrt | 100 | 0.872 |  |
| 7 | mse | log2 | 10 | 0.848 |  |
| 8 | mse | log3 | 50 | 0.868 |  |
| 9 | mse | log4 | 100 | 0.847 |  |
| 10 | mae | auto | 10 | 0.846 |  |
| 11 | mae | auto | 50 | 0.856 |  |
| 12 | mae | auto | 100 | 0.859 |  |
| 13 | mae | sqrt | 10 | 0.865 |  |
| 14 | mae | sqrt | 50 | 0.873 |  |
| 15 | mae | sqrt | 100 | 0.875 |  |
| 16 | mae | log2 | 10 | 0.875 |  |
| 17 | mae | log3 | 50 | 0.875 |  |
| 18 | mae | log4 | 100 | 0.875 |  |
|  |  |  |  |  |  |
| Best r2\_score value for insurance\_pre.csv = 0.875 | | | | |  |